Correspondence

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TO THE EDITOR, *Genitourinary Medicine*

Increase in new patients with genital warts attending STD clinics in Helsinki, 1980–6

Sir,

The two sexually transmitted disease (STD) clinics in Helsinki serve a population of about 1·5 million. Recent reports have clearly indicated that genital warts are common and their incidence appears to be increasing.[1 2] Although the information available is based on cases diagnosed at STD clinics and a high proportion of underdiagnosing occurs,[3] genital warts currently constitute the most important STD after chlamydial infection and gonorrhoea.

We report the new cases of genital warts diagnosed at the STD clinics in Helsinki in comparison with new cases of gonorrhoea and the total number of new patients in 1980–6 (table).

During the study period the numbers of new patients increased 1·6-fold, and the number with genital warts increased 2·8-fold. Gonorrhoea decreased 1·4-fold. Diagnosed cases of genital warts increased from 4·9% to 8·8% of new patients and at the same time gonorrhoea decreased from 19·2% to 8·5%. The incidence of genital warts increased slowly until 1985, but during the past two years the increase has been fast. Genital warts have probably reached an epidemic level in Finland. This is of the utmost importance as certain human papillomavirus (HPV) types may induce genital neoplasia.

Yours faithfully,

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Table *Genital warts and gonorrhoea diagnosed at the two STD clinics in Helsinki, 1980–6*

Year	*No of new patients*	*No (%) of new patients with genital warts*	*No (%) of new patients with gonorrhoea*
1980	13731	667 (4·9)	2640 (19·2)
1981	13432	717 (5·3)	2159 (16·1)
1982	13436	994 (7·4)	2660 (19·8)
1983	14809	1004 (6·8)	2156 (14·6)
1984	15992	1095 (6·8)	2018 (12·6)
1985	19100	1368 (7·2)	2230 (11·7)
1986	21557	1889 (8·8)	1883 (8·7)

References

1 Chief medical officer of the DHSS. Sexually transmitted diseases: extract from annual report of chief medical officer to the department of health and social security for the year 1982. *British Journal of Venereal Diseases* 1984;**60**:199–203.
2 Katz RL, Anderson MD, Weiss KM. Diagnosis and epidemiology of condyloma acuminatum. *JAMA* 1984;**251**:1028–9.
3 Chuang T-Y, Perry HO, Kurland LT, Ilstrup DM. Condyloma acuminatum in Rochester, Minn, 1950–1978. I. Epidemiology and clinical features. *Arch Dermatol* 1984;**120**: 469–75.

TO THE EDITOR, *Genitourinary Medicine*

How reliable is cell culture for detecting *Chlamydia trachomatis* in patients with urogenital inflammation?

Sir,

Cell culture for isolating *Chlamydia trachomatis* was introduced in 1965 by Gordon and Quan.[1] This method, modified by Ripa and Mårdh in 1977 by pretreating the cell culture tissue with cycloheximide,[2] has since been regarded as the most reliable test for detecting *C trachomatis* in patients with urogenital inflammation. During recent years new methods, based on fluorescein conjugated monoclonal antibody against *C trachomatis* and on the enzyme immunoassay technique, have been introduced to detect chlamydial antigen. Almost all these tests have been evaluated according to the results obtained by cell culture, but how reliable is this method?

In the study published here, samples taken from the urogenital tract of patients with clinical symptoms of infection, were analysed by cell culture using cycloheximide treated McCoy cells,[2] by a fluorescein conjugated monoclonal antibody test (Micro-Trak, Syva),[3] and by an enzyme immunoassay (Chlamydiazyme, Abbott Laboratories).[4] A total of 150 patients, 70 women and 80 men, were tested by all three methods for urethral and (in the women) cervical *C trachomatis*; 30 of the 150 patients were chlamydia positive when examined by the cell culture method. All three tests gave positive results in 22, negative results in 93, and conflicting results in 35 patients.

The Chlamydiazyme test was negative in six of the 30 cell culture positive patients and positive in 11 of the 120 culture negative patients (sensitivity 88%; specificity 96%; false positive rate 4%; false negative rate 12%). The Micro Trak test gave negative results in four of the culture positive and positive results in 22 of the culture negative patients (sensitivity 94%; specificity 86%; false positive rate 14%; false negative rate 6%). Similarly, cell culture gave negative results in six of the 28 patients who had a positive result when examined by the two other tests, and positive results in two of the 95 patients who were found negative by Micro Trak and Chlamydiazyme tests (sensitivity 82%; specificity 98%; false positive rate 2%; false negative rate 18%). The above calculations were made on the assumption that results that were positive in two tests were true positives, and results that were positive in only one test or negative in all three tests were true negatives.

These results clearly show that none of the three methods tested are completely reliable. All give false negative and false positive results. The traditional use of results obtained by the cell culture method for testing the reliability of newly introduced methods is not valid as eight results obtained by cell culture were false positives or negatives based on concordance with the two other tests.

This lack of reliability of cell culture is not surprising: the principle of the test is that vital chlamydial antigen is transferred from the urogenital tract of the patient via a swab